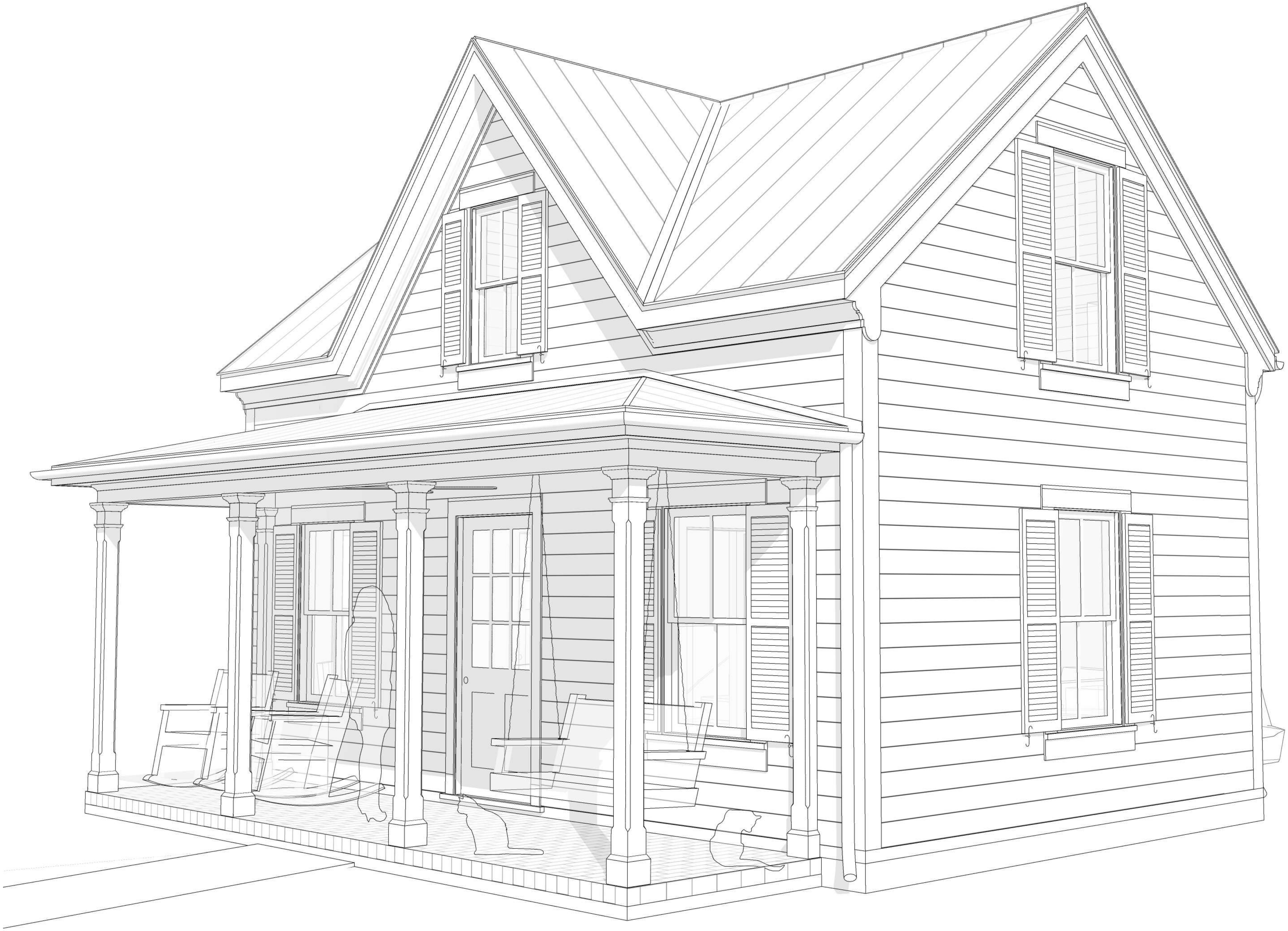


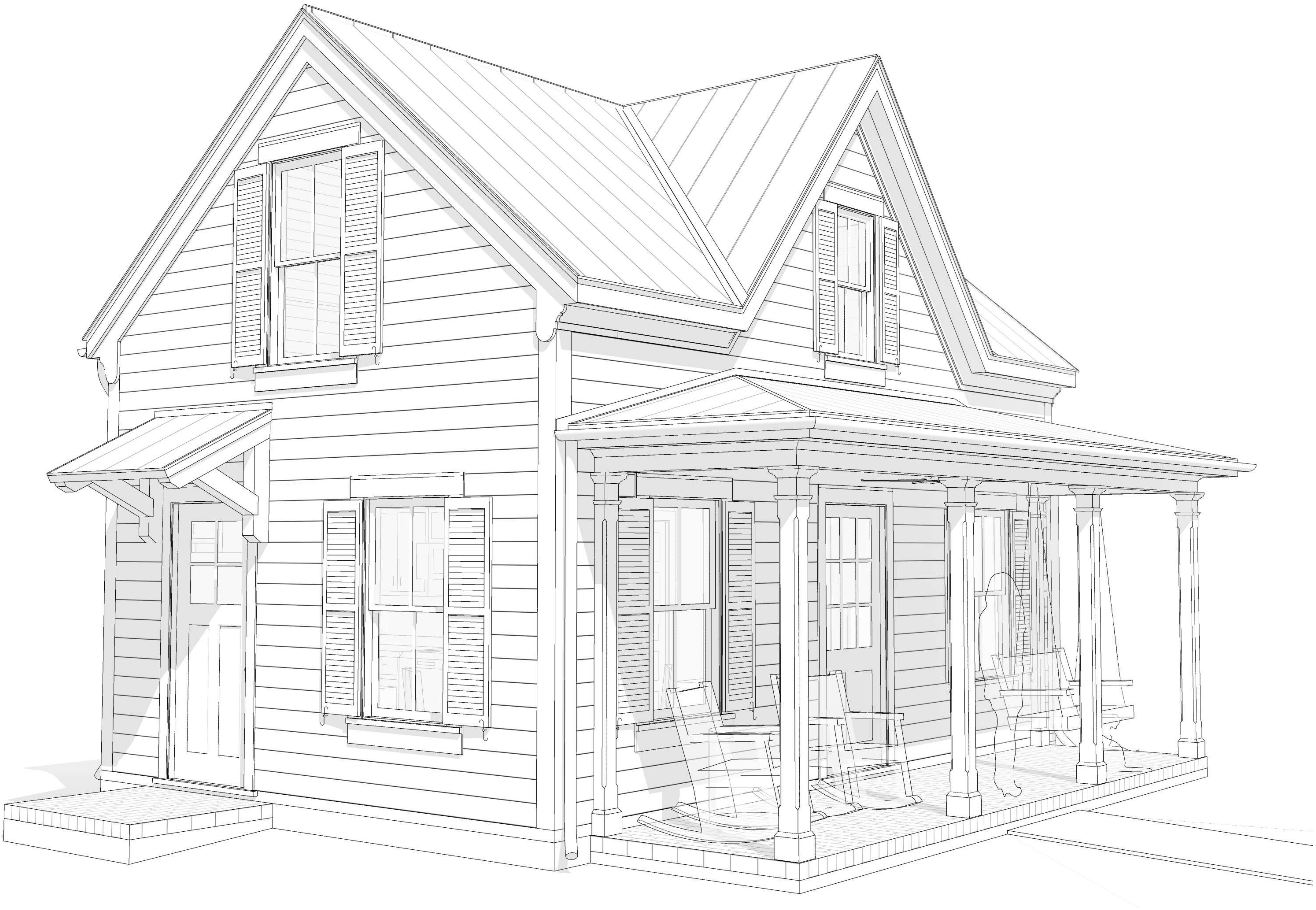
Thank you for supporting my work. My Backyard Farmhouse design is based on a common archetype from the 1800s— a house with 1.5 stories and a front-facing gable. Such designs were most common in northern climates because they were compact— with a minimal amount of interior volume— and therefore easier to heat in the winter. Now, their compact size can be especially useful as an accessory dwelling unit (ADU).

BACKYARD FARMHOUSE

FRONT PERSPECTIVE 1

JAY OSBORNE

Backyard cottages are becoming more popular now— primarily because they are finally being legalized again. A century of suburban zoning is being questioned. The housing crisis of today can only be solved by making it easier to build houses for people of modest means— not be crippling them with debt. As ADUs become legal in many towns and cities, they allow us to build new towns with the same grace and charm of old ones.



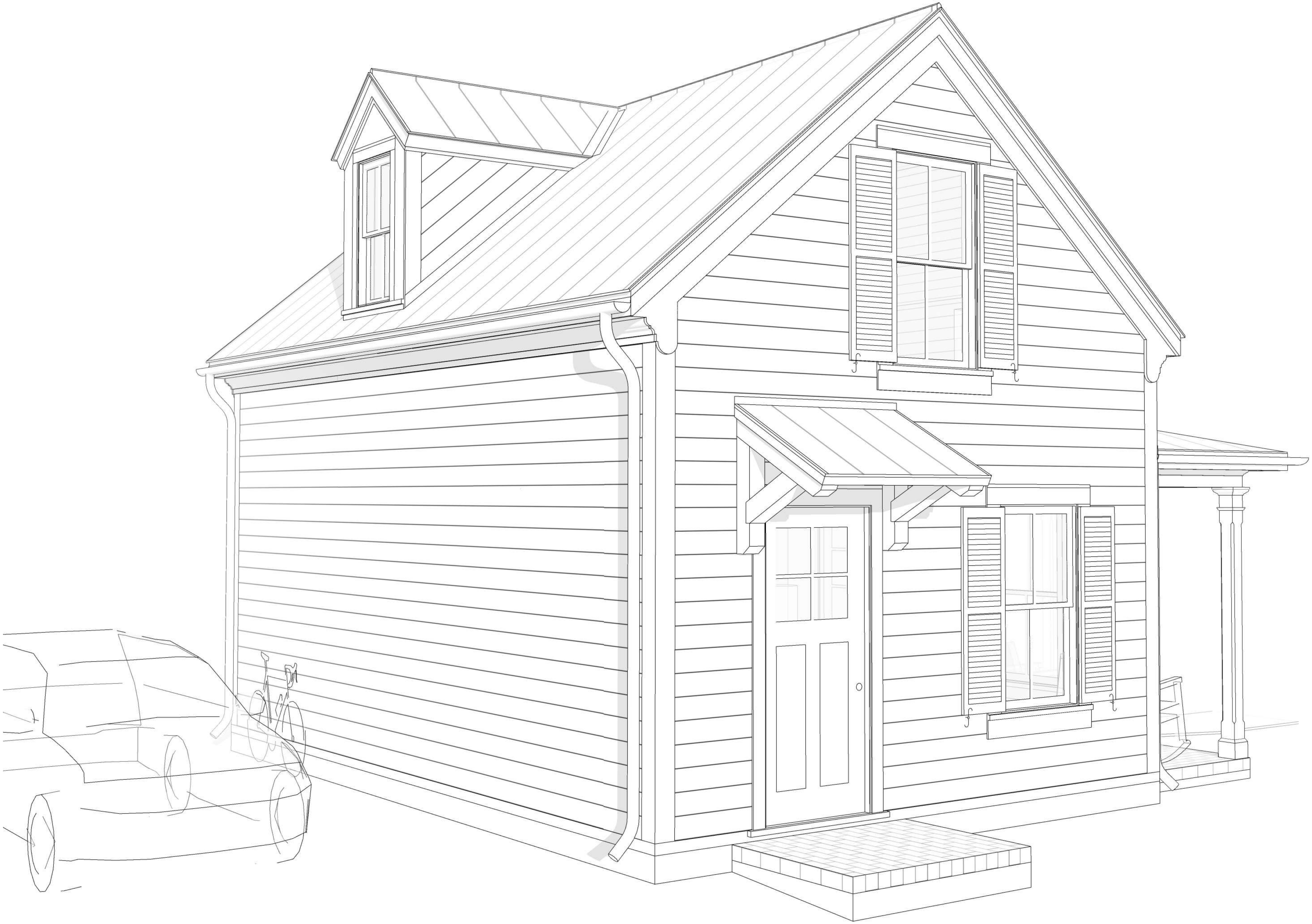
This little house is designed to work with modern codes and zoning ordinances (at lease, the zoning ordinances that don't ban small houses and criminalize poor people.) With that in mind, the design fits within a 20 foot maximum height limit and 16' mid-slope (average roof) height restriction. These are often used to restrict the size of ADUs. These numbers make it difficult to build 2-story houses, but here is one solution.

BACKYARD FARMHOUSE

FRONT PERSPECTIVE 2

JAY OSBORNE

This design is also created with the expectation that alterations will be made, and derivatives versions as well. By stretching out the side rooms, the design can be larger without being any more complex. In total, this house has about 650 square feet, but it could easily be stretched to have another 200 square feet. Also, it's easy to build a rear addition, like a garage or bedroom suite. Just give it a lean-to roof, and it will work well.



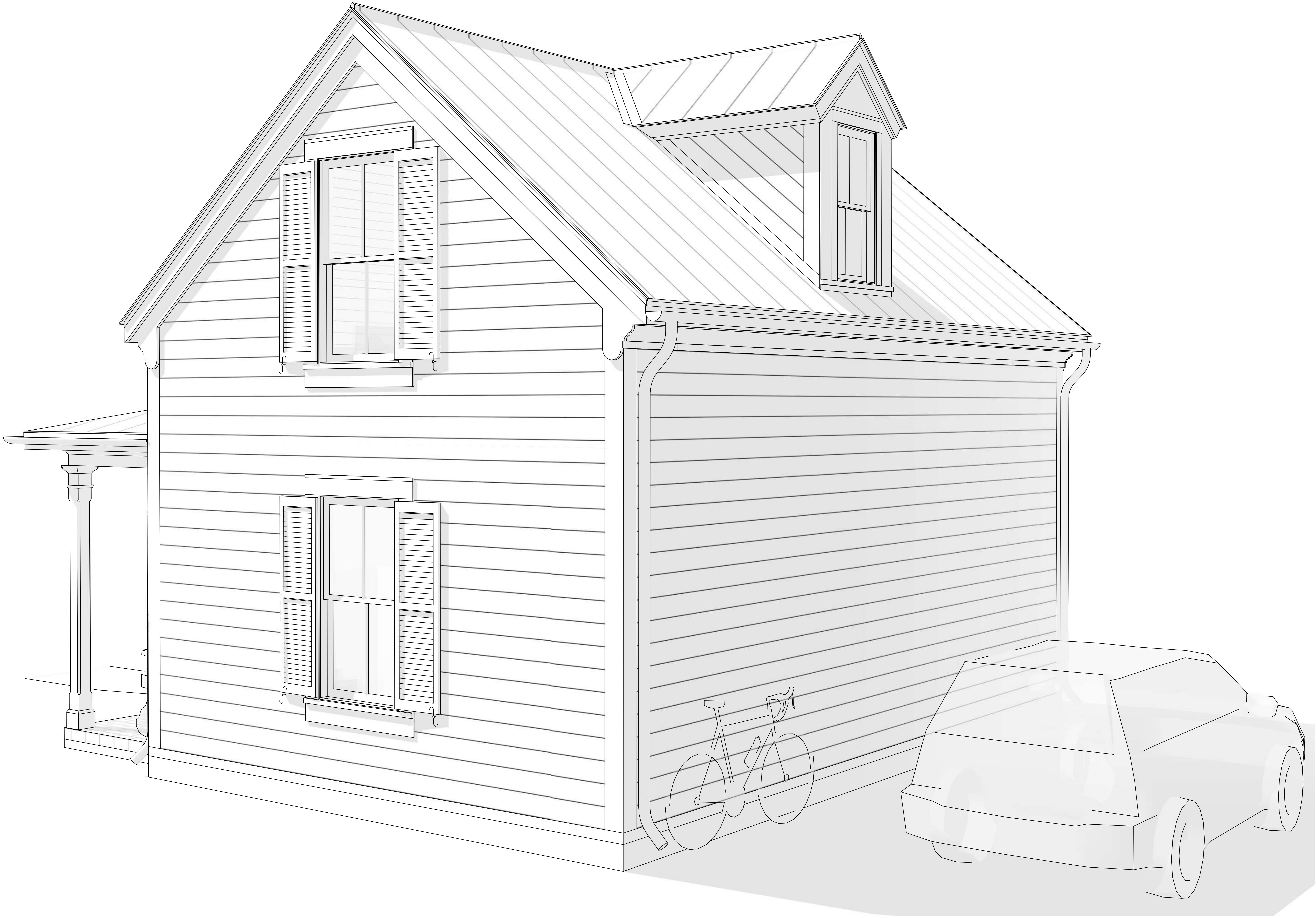
I general dislike walls without windows. More small windows are always better than a few large ones. However, this side of the house is meant to be informal and plain. It could have a rear addition, like a garage or bedroom suite— which could be added at the beginning of construction, or over time as it is needed. Also, without windows on this facade, it can be as little as 3' against the property line. This is for fire code reasons.

BACKYARD FARMHOUSE

BACK PERSPECTIVE 1

JAY OSBORNE

Also, having no windows on the rear wall will help preserve the privacy of the neighbors. It's no problem for you to have more windows— you can always add curtains when you want privacy— but a neighbor can not so easily block your windows. Furthermore, you might want to keep a few unsightly things on that side of the house. All good houses have a rear— a place where the trash bins go. Formal needs informal to function properly.



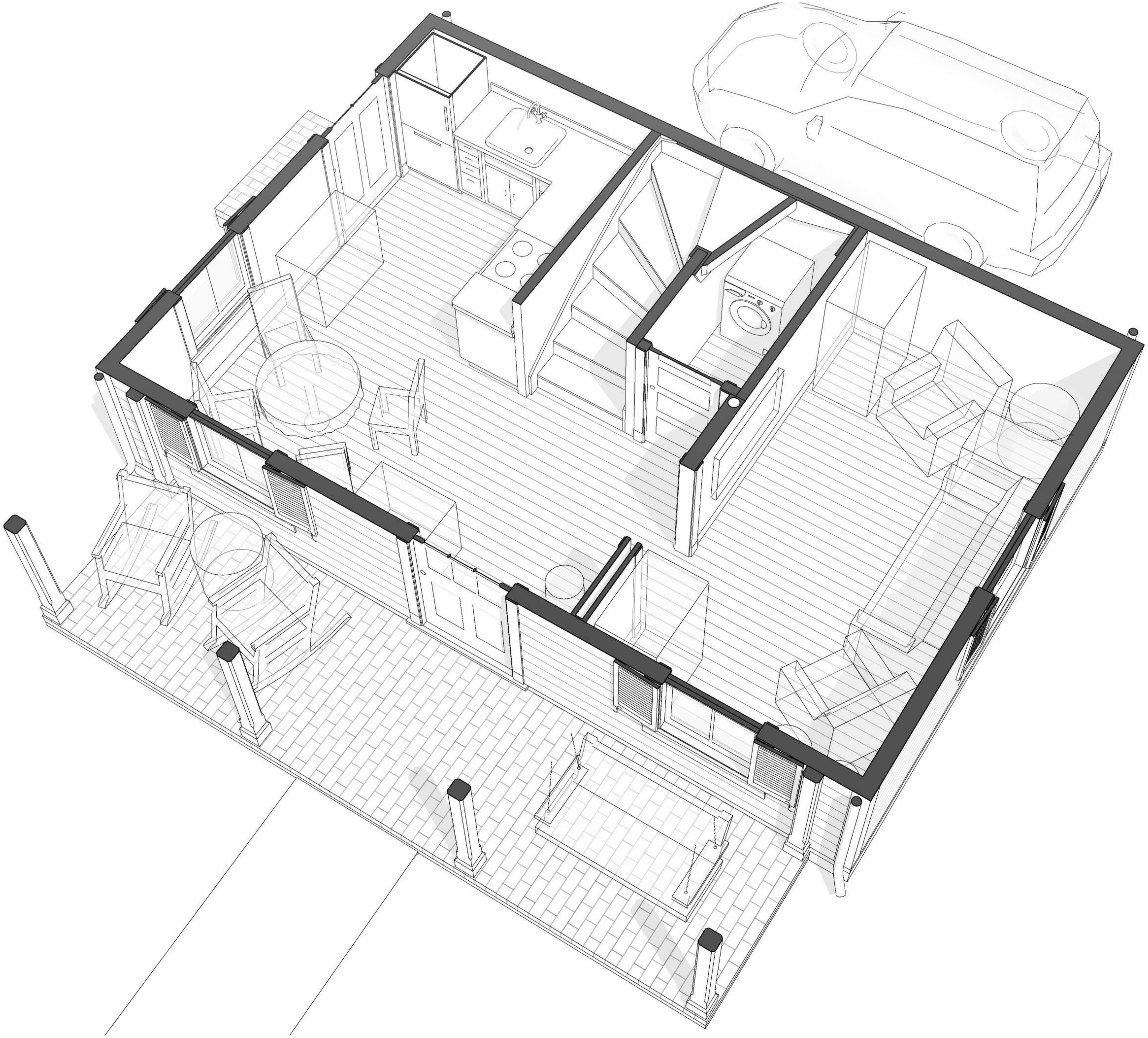
The dormer window might be simplified in future versions of this design. Shed dormers are a lot easier to build. Also, that would save money. The dormer is needed here to preserve the head height clearances of the stairwell. As a shed dormer, it could be longer, helping simplify the entire stair design. I may just resort to using a shed dormer, before the builders make such a compromise. Simplicity may be needed here.

BACKYARD FARMHOUSE

BACK PERSPECTIVE 2

JAY OSBORNE

A quick note: do not use vinyl or aluminum siding. It's impossible to create good details using flimsy snap-in-place siding. All the edges and connections look wrong. I usually recommend fiber cement siding because it will probably last a century or two. It is fireproof, bug-proof, rot-resistant, dimensionally stable, and less expensive than wood siding. In comparison, the siding details look much the same as in old houses.



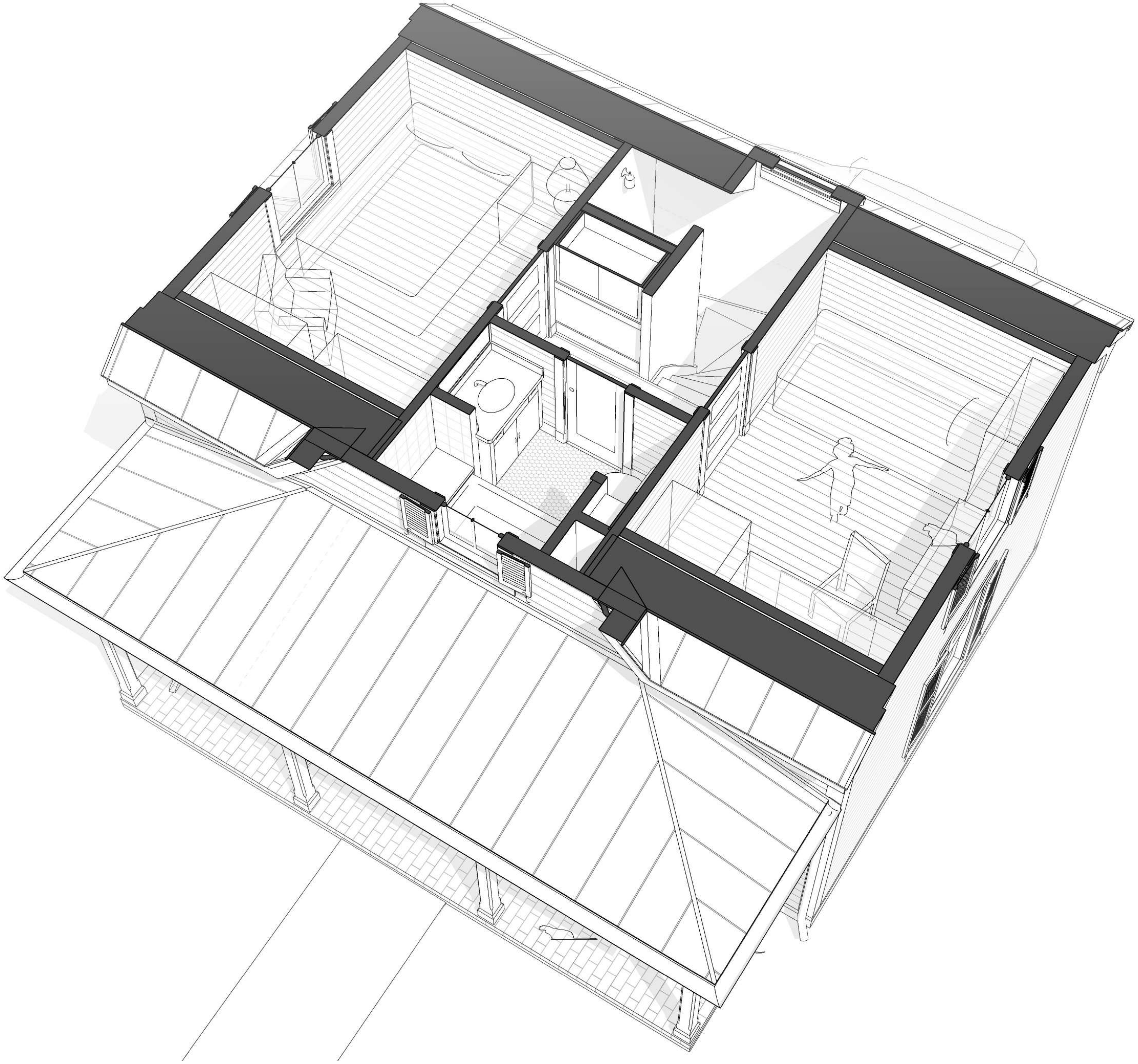
The house is organized with most of the circulation zones towards the center. This is the most efficient way to organize space. Also, it makes it easier to stretch out the side rooms if you want a larger house (not as an addition, but as an initial modification). The side rooms are only about 8 feet wide in this version, which is still comfortable enough, but approaching the smallest dimension for a room (7 feet wide, by the building code).

BACKYARD FARMHOUSE

FIRST FLOOR

JAY OSBORNE

Seen here, the winder stairs are first constructed as a series of overlaid platforms. As they get more than 3 feet above the floor, they are constructed as staggered platforms, supported by diagonal 2x10s and a 2x4 platform assembly. The utility room below the staircase will probably demand fire resistant ceilings. A single layer of gypsum board mounted to the base of each stepping platform can give you more head height as well.



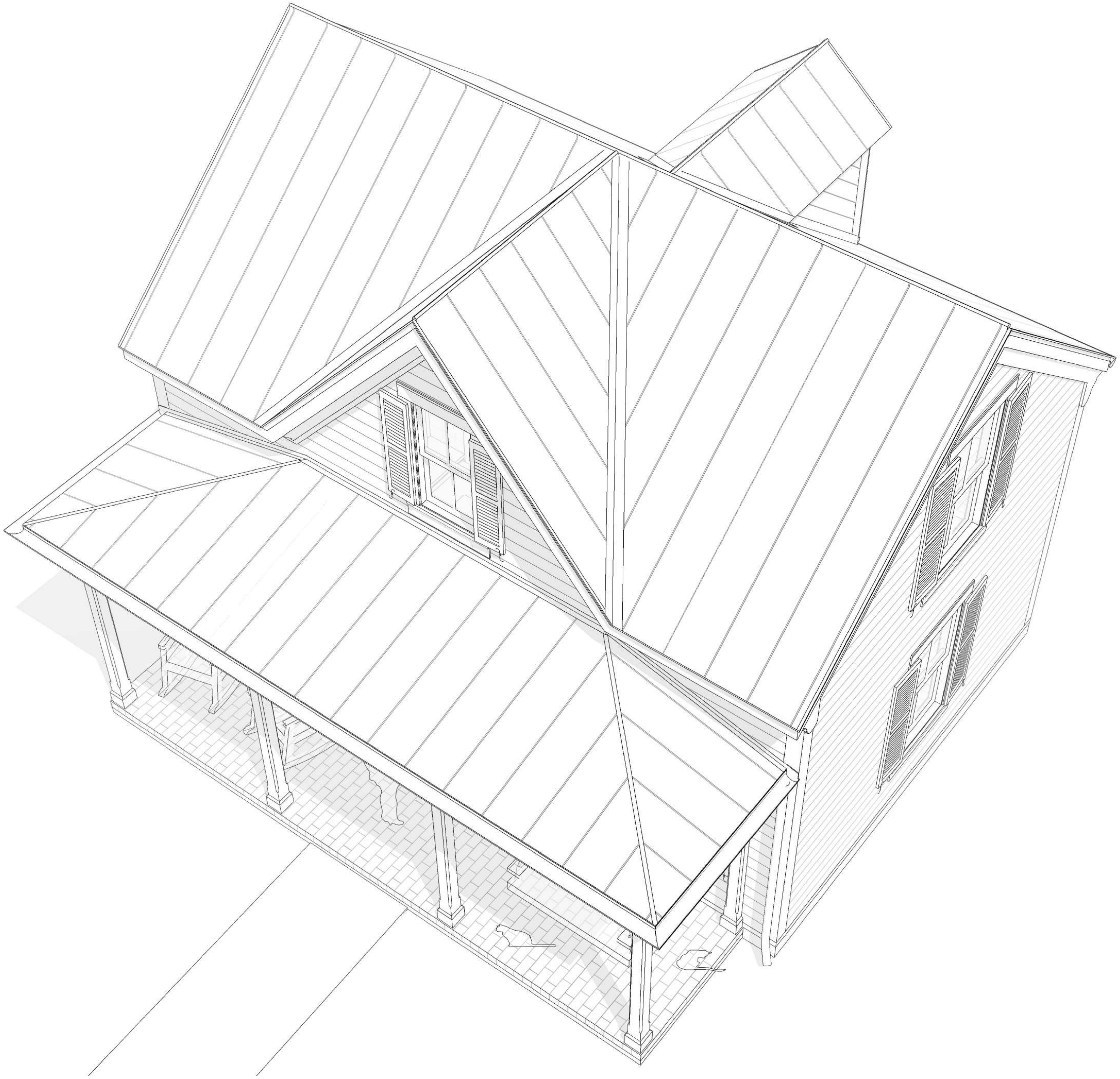
Upstairs, this house is a lesson in minimums. Its compact size requires a deep knowledge of building code requirements. For instance, a bedroom must be at least 70 square feet in size (in most places). Up to 50% of that area can have less than a 7 foot ceiling height; but where a ceiling is less than 5 feet high, that area of the room can not qualify as floor area. Just a taste of the constraints that form these spaces.

BACKYARD FARMHOUSE

SECOND FLOOR

JAY OSBORNE

(1) The bathtub also has some head height issues. That's the main reason it's placed at the center of the front gable— anywhere else, and you'd be bumping you head as you took a shower. By code, you only need a 30x30 inch area of a tub to have more than 80 inches in ceiling height. However, I made the tub 30x48, and gave it a built-in seat where the ceiling sloped low. The toilet and vanity also have tight minimum head clearances.



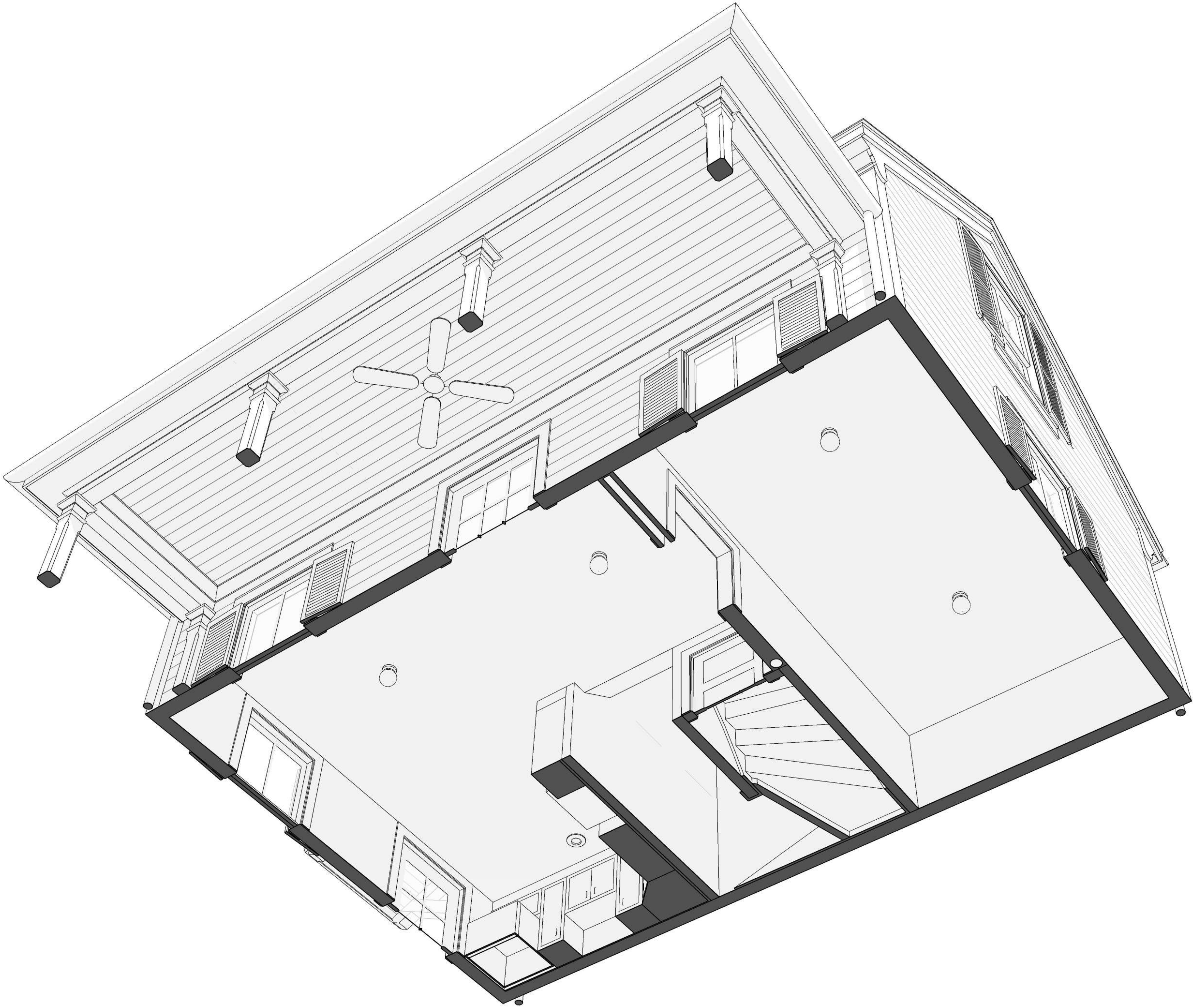
This roof is relatively complex to build— but nothing that most builders haven't dealt with. The shape of the roof reflects the necessary head clearances of the spaces below it. The center gable contains the bathroom. The dormer gives space for the stairwell. And the porch roof is high enough to make the posts look appropriately proportioned. In short, the space between the columns should be square or vertically proportioned.

BACKYARD FARMHOUSE

THE ROOF

JAY OSBORNE

This design specifies standing seam roofing. It's one of the most durable types of roof, though it's unfortunately also fairly expensive. To save costs, you might use 5V metal roofing, or even asphalt shingles. The slope of the porch roof is a little steeper than it would have been historically (roof slopes used to be measured in units of 5, so the porch would have been a 1:5 slope (roughly 2.5:12). Historical slopes are used in the main roof.



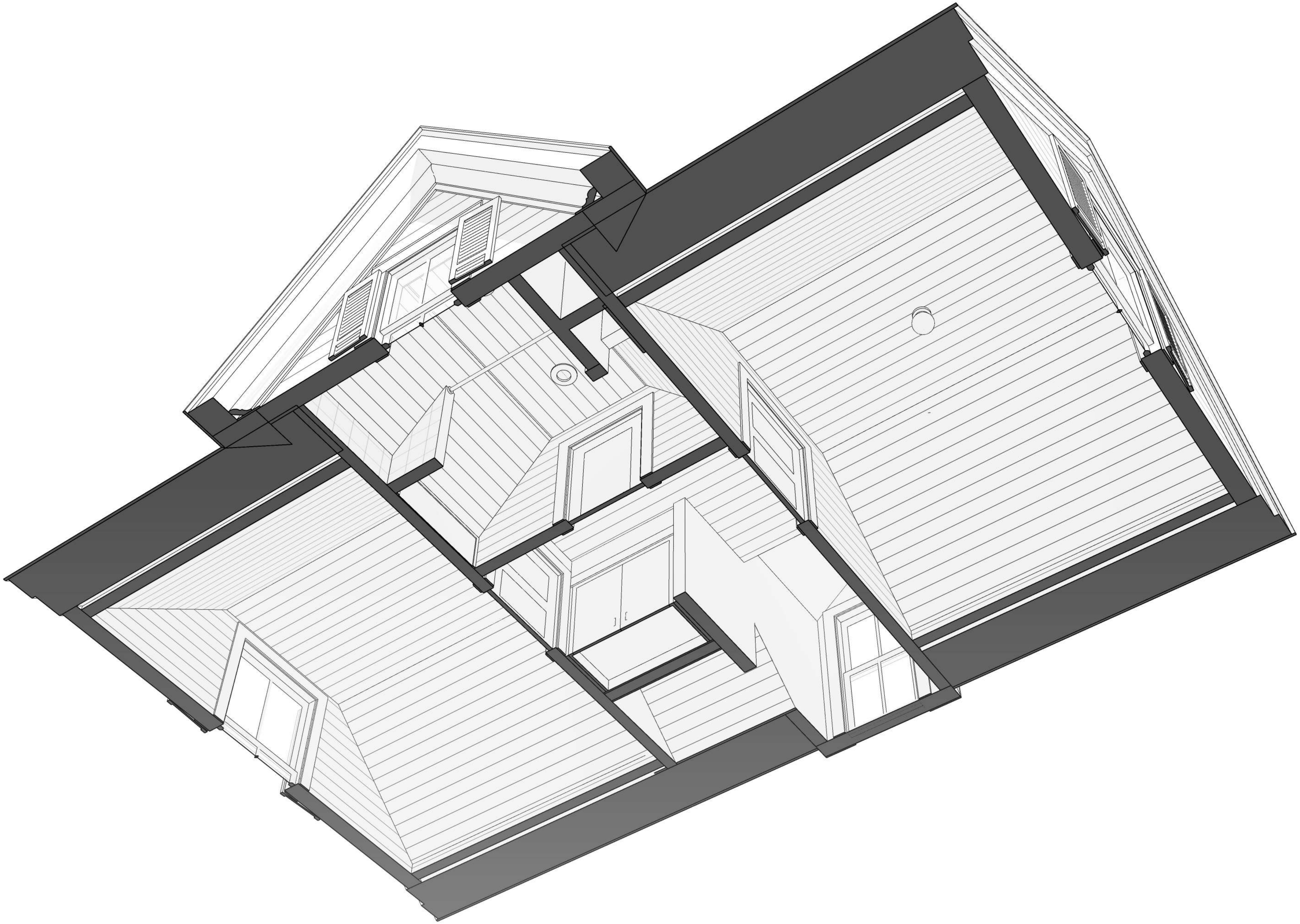
The downstairs ceiling is about seven and a half feet high. Seven feet is allowable in the residential building code, but it often makes it difficult to specify lighting fixtures that won't whack your tall friends in the head. Also, it gets difficult to use historically proportioned windows if the ceiling is too low. That's why it's better to have 9' ceilings if you have large 3x6 windows. The windows here are small enough to still work.

BACKYARD FARMHOUSE

DOWNSTAIRS CEILING

JAY OSBORNE

Here, you can see the kitchen that is nestled cozily into the back corner of the house. On the other side, the living room has a pocket door, which allows you to enclose the space for privacy, or turn it into a guest bedroom. In a few places, bedroom size requirements are so overly-restrictive that you'd need to consider this a bedroom just to have an allowed occupancy of 2 adults and 2 kids. But that probably won't be a major issue.



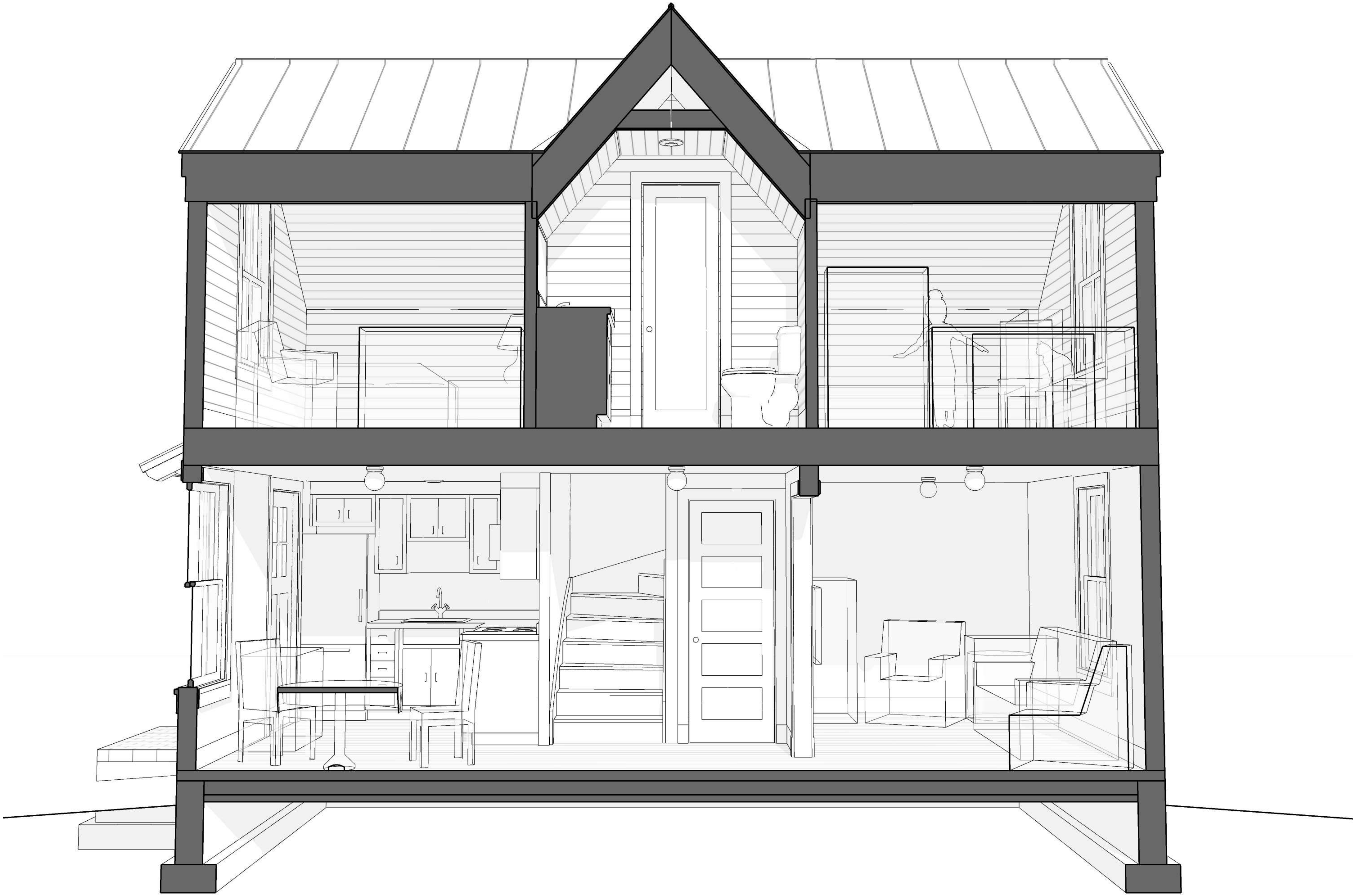
This is hard. It's no exaggeration to say the the ceiling heights of this level are the main determinant of the entire design. By working with the 16 foot average gable maximum (fairly typical of ADU zoning codes) and the minimum head height requirements demanded by the building code, this design is tight to the point of being inflexible. If you want to make the house have more area, though, just stretch the rooms to the side.

BACKYARD FARMHOUSE

UPSTAIRS CEILING

JAY OSBORNE

The ceilings throughout this level have beadboard panels. The tactile nature of wood seems appropriate in rooms where the ceiling is so low as to be quite touchable. This coziness will also give the feeling of being in a tent. As long as you keep furniture along the side walls, you probably won't be at risk of bumping your head on the ceilings. But if you're going to change anything here, you might want to raise these ceilings 6-18 inches.



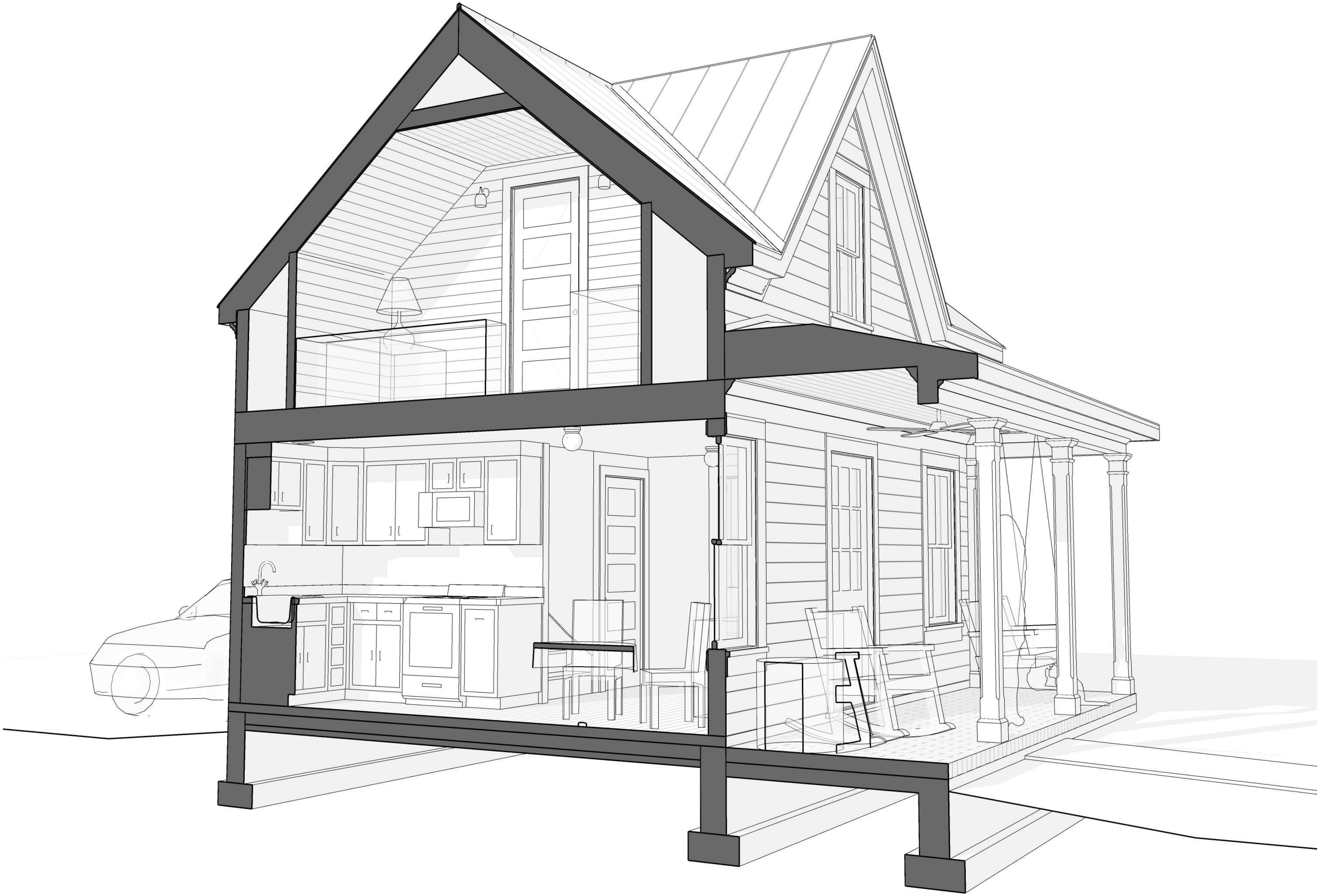
This house was designed to work well for 1-3 people. On a short-term basis, the living room could allow a few guests. At just 650 square feet, and with an exceptionally compact volume, this house packs a lot of functionality into a small package, just the like houses of the past. The furniture may give these renderings a better sense of scale, but it should be noted that static images rarely do justice to representing small spaces.

BACKYARD FARMHOUSE

LONG SECTION

JAY OSBORNE

To keep the massing of the house low, a slab is used as the foundation. Often a building height is measure to the bottom of a slab (or to the undisturbed soil). So to fit within the 20 foot height requirement, this design gives a foot for the first floor structure. However, foundations are highly site specific. It's common to reengineer them as needed. So if you want a foundation, it's not hard. Just get rid of the utility closet and stack the staircases.



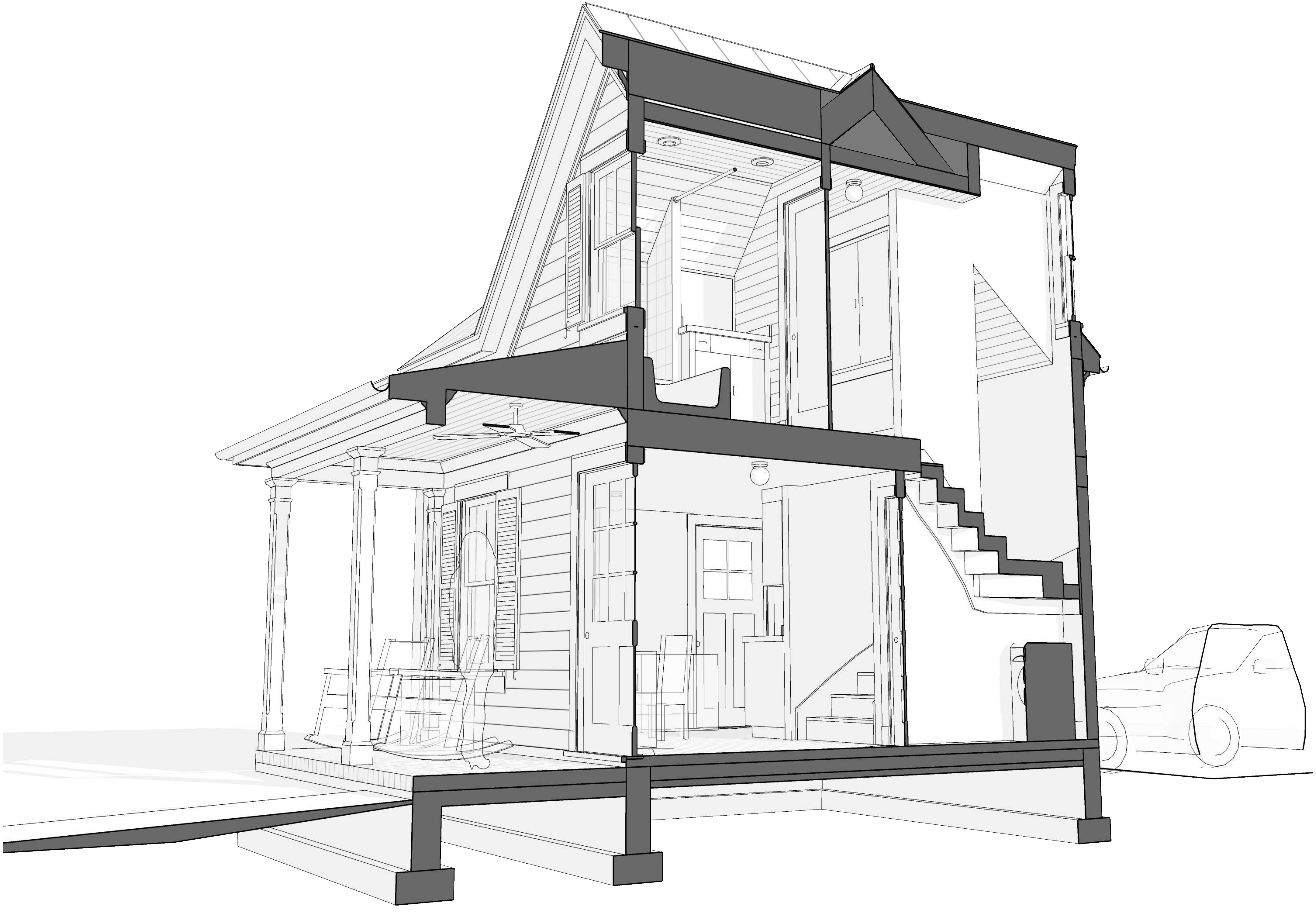
Roofs need more insulation than walls or floors. This is one reason why 2x12s are used as roof rafters. It's assumed that batt insulation will be used for an R-38 assembly, but if you live in colder climates, you might need to use a material with a higher R-value (like closed cell spray foam, or polyisocyanurate panels). You could also use outboard insulation in conjunction with this, but that will make the house a few inches taller.

BACKYARD FARMHOUSE

TRANSVERSE SECTION 1

JAY OSBORNE

The front porch is fairly large, but it is only 5 feet deep. That is about as narrow as a porch can be. If it had a railing, I'd recommend making it 6 feet deep. The top of the porch roof is getting somewhat close to the eave above it, but it still allows some space for piling snow. Ice dams are one reason why, in old houses, there's often a vertical break from the main roof and porch roof. In southern climates, that's also why they may be connected.



The winder stairs are constructed as a series of staggered platforms, with fire resistant sheathing below, so that the space under them can be used as a utility room. Normal stairs could not work in this space, but a spiral staircase might be functional. It just requires some more thought for how to seal or support the circular walls, so that the space can be used below it. Winder stairs are versatile, but are now heavily regulated.

BACKYARD FARMHOUSE

TRANSVERSE SECTION 2

JAY OSBORNE

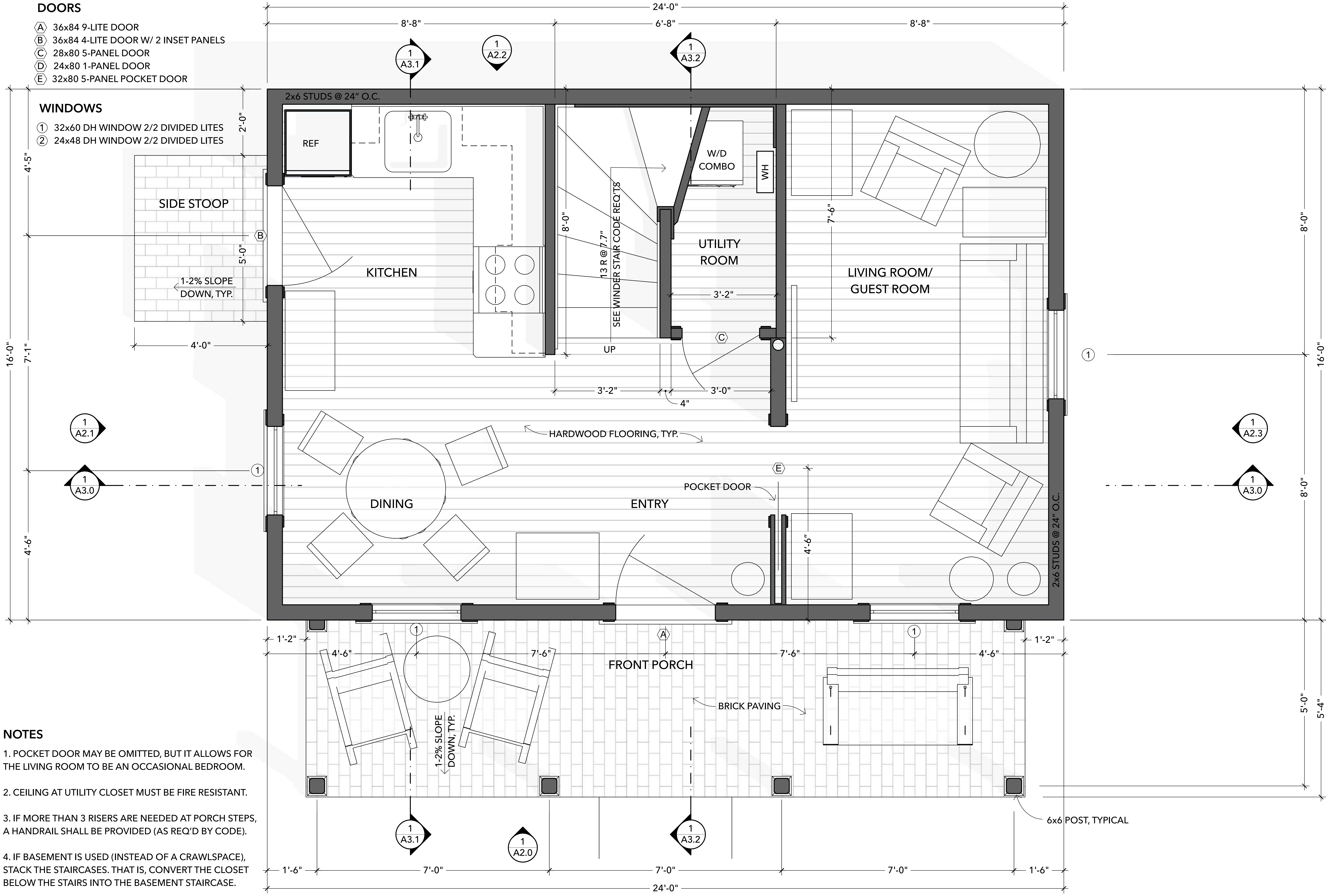
If you can raise the roof by a few inches, I recommend that you add a 1-2" layer of rigid insulation over the roof sheathing, to serve as a thermal break. This keeps the roof rafters from getting too hot or cold (which would then be transmitted indoors). Wood is a poor insulator, so each rafter is a weakness from an energy perspective. Much of this design can be simpler by making the house a couple feet taller. You can customize it as needed.

DOORS

- Ⓐ 36x84 9-LITE DOOR
- Ⓑ 36x84 4-LITE DOOR W/ 2 INSET PANELS
- Ⓒ 28x80 5-PANEL DOOR
- Ⓓ 24x80 1-PANEL DOOR
- Ⓔ 32x80 5-PANEL POCKET DOOR

WINDOWS

- ① 32x60 DH WINDOW 2/2 DIVIDED LITES
- ② 24x48 DH WINDOW 2/2 DIVIDED LITES



① 1ST FLOOR PLAN
SCALE: 1/2" = 1'-0"

NOTES

1. POCKET DOOR MAY BE OMITTED, BUT IT ALLOWS FOR THE LIVING ROOM TO BE AN OCCASIONAL BEDROOM.

2. CEILING AT UTILITY CLOSET MUST BE FIRE RESISTANT.

3. IF MORE THAN 3 RISERS ARE NEEDED AT PORCH STEPS, A HANDRAIL SHALL BE PROVIDED (AS REQ'D BY CODE).

4. IF BASEMENT IS USED (INSTEAD OF A CRAWLSPACE), STACK THE STAIRCASES. THAT IS, CONVERT THE CLOSET BELOW THE STAIRS INTO THE BASEMENT STAIRCASE.

A DESIGN BY JAY OSBORNE
BACKYARD FARMHOUSE
ORIGINAL VERSION

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1	**2023-11-30**	FIRST PRESENTATION (SCHEMATIC)

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1ST FLOOR PLAN

DOORS

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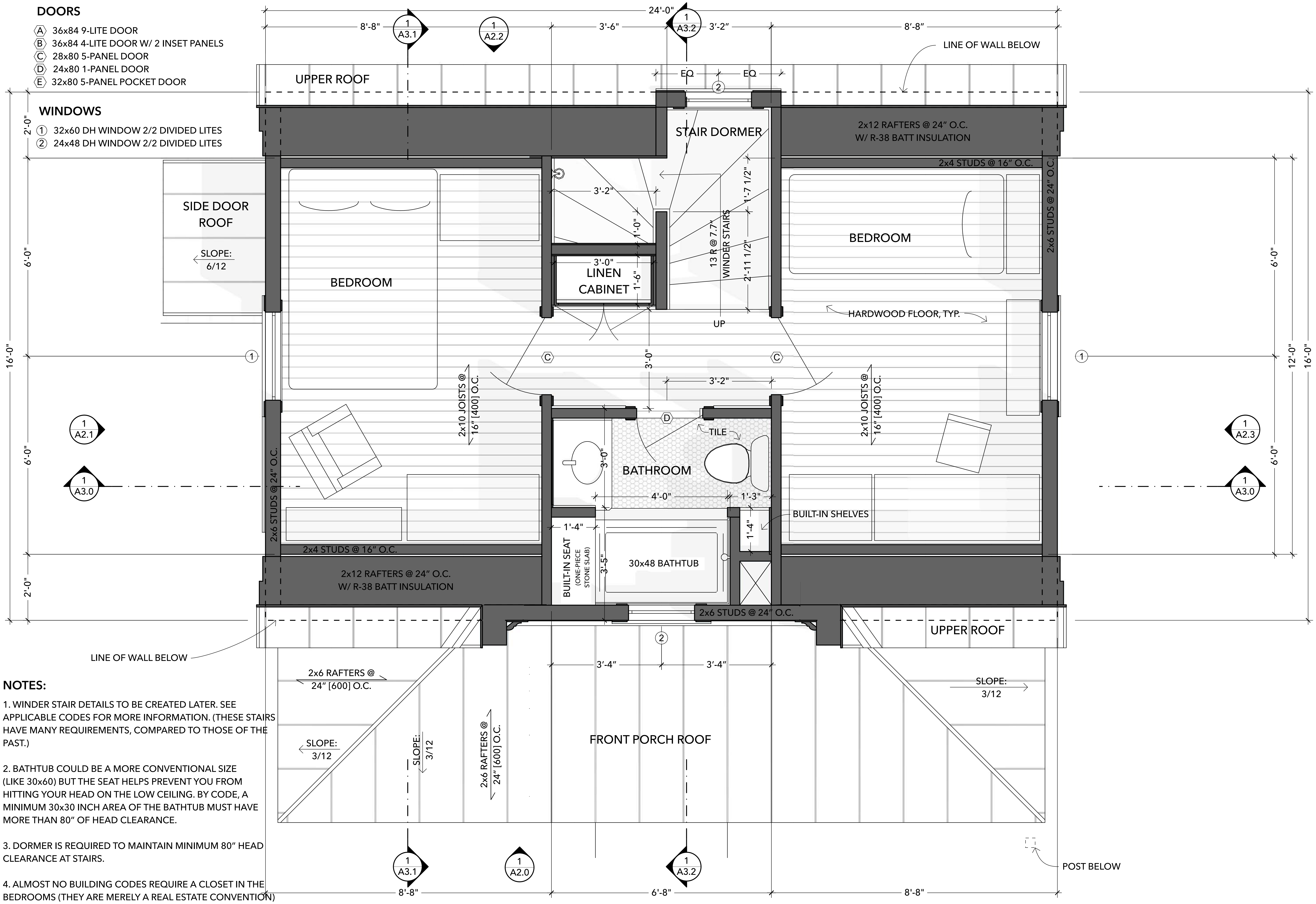

① 2ND FLOOR PLAN

SCALE: 1/2" = 1'-0"

NOTES:

1. WINDER STAIR DETAILS TO BE CREATED LATER. SEE APPLICABLE CODES FOR MORE INFORMATION. (THESE STAIRS HAVE MANY REQUIREMENTS, COMPARED TO THOSE OF THE PAST.)

2. BATHTUB COULD BE A MORE CONVENTIONAL SIZE (LIKE 30x60) BUT THE SEAT HELPS PREVENT YOU FROM HITTING YOUR HEAD ON THE LOW CEILING. BY CODE, A MINIMUM 30x30 INCH AREA OF THE BATHTUB MUST HAVE MORE THAN 80" OF HEAD CLEARANCE.

3. DORMER IS REQUIRED TO MAINTAIN MINIMUM 80" HEAD CLEARANCE AT STAIRS.

4. ALMOST NO BUILDING CODES REQUIRE A CLOSET IN THE BEDROOMS (THEY ARE MERELY A REAL ESTATE CONVENTION) BUT SOME LOCAL ORDINANCES MAY APPLY. A WARDROBE OR ARMOIRE PROVIDES MUCH MORE FLEXIBILITY.

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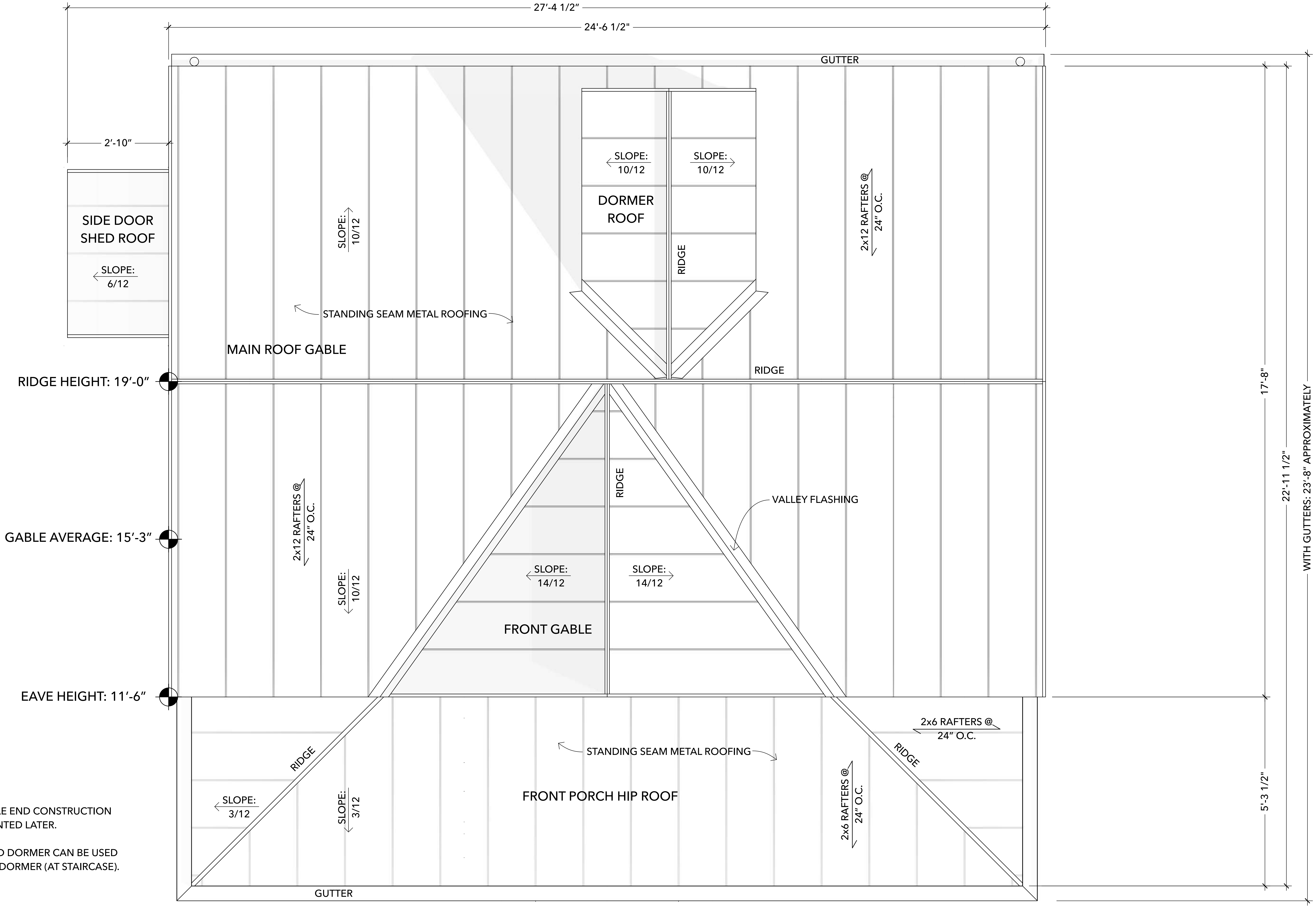
2ND FLOOR PLAN

A1.2



NOTES:

1. DORMER AND GABLE END CONSTRUCTION DETAILS TO BE PRESENTED LATER.

2. TO SAVE COST, SHED DORMER CAN BE USED INSTEAD OF A GABLE DORMER (AT STAIRCASE).

① 2ND FLOOR PLAN

SCALE: 1/2" = 1'-0"

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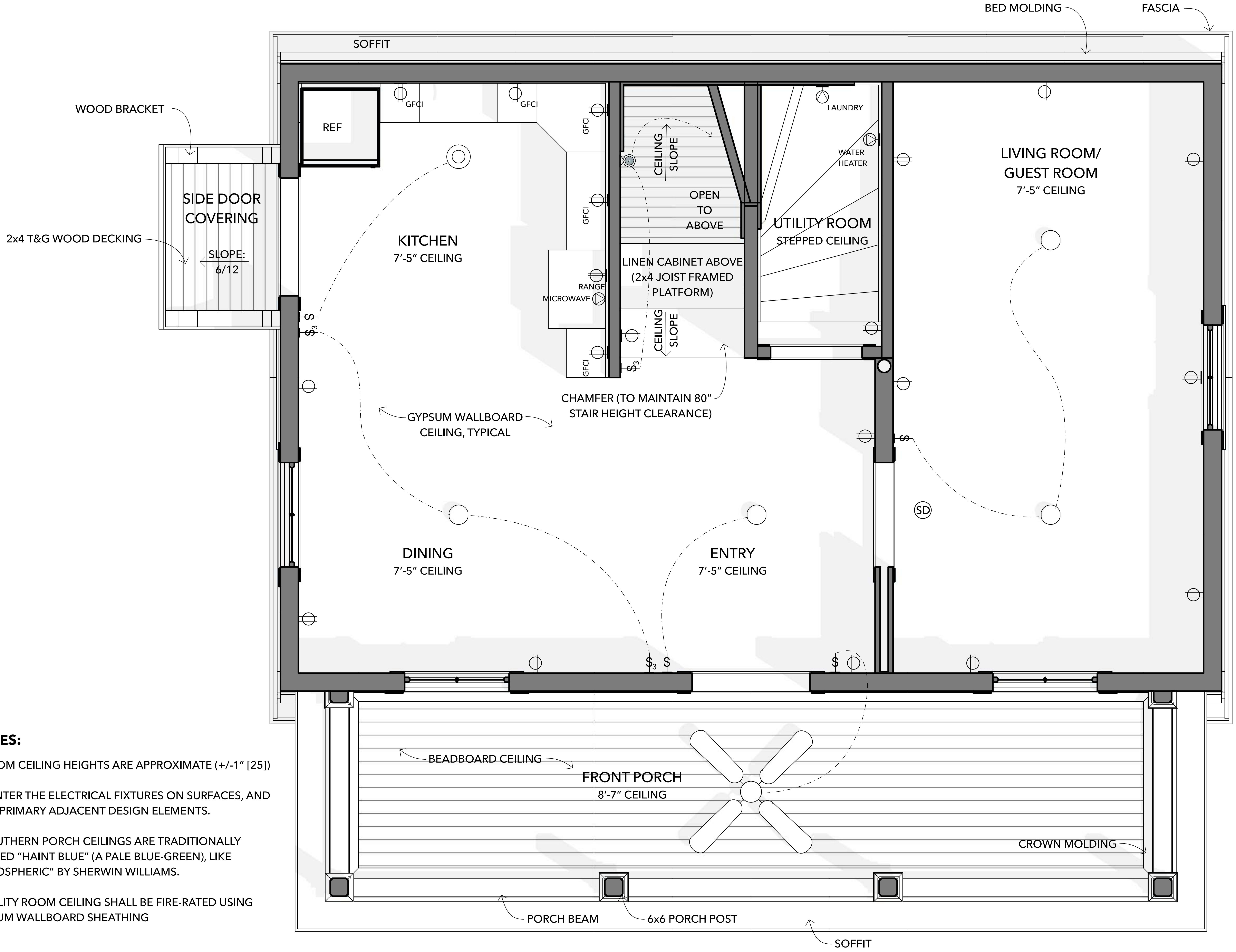
ROOF PLAN

A1.3



NOTES:

1. ROOM CEILING HEIGHTS ARE APPROXIMATE (+/-1" [25])

2. CENTER THE ELECTRICAL FIXTURES ON SURFACES, AND WITH PRIMARY ADJACENT DESIGN ELEMENTS.

3. SOUTHERN PORCH CEILINGS ARE TRADITIONALLY PAINTED "HAINT BLUE" (A PALE BLUE-GREEN), LIKE "ATMOSPHERIC" BY SHERWIN WILLIAMS.

4. UTILITY ROOM CEILING SHALL BE FIRE-RATED USING GYPSUM WALLBOARD SHEATHING

① 1ST LEVEL - REFLECTED CEILING PLAN / ELECTRICAL PLAN

SCALE: 1/2" = 1'-0"

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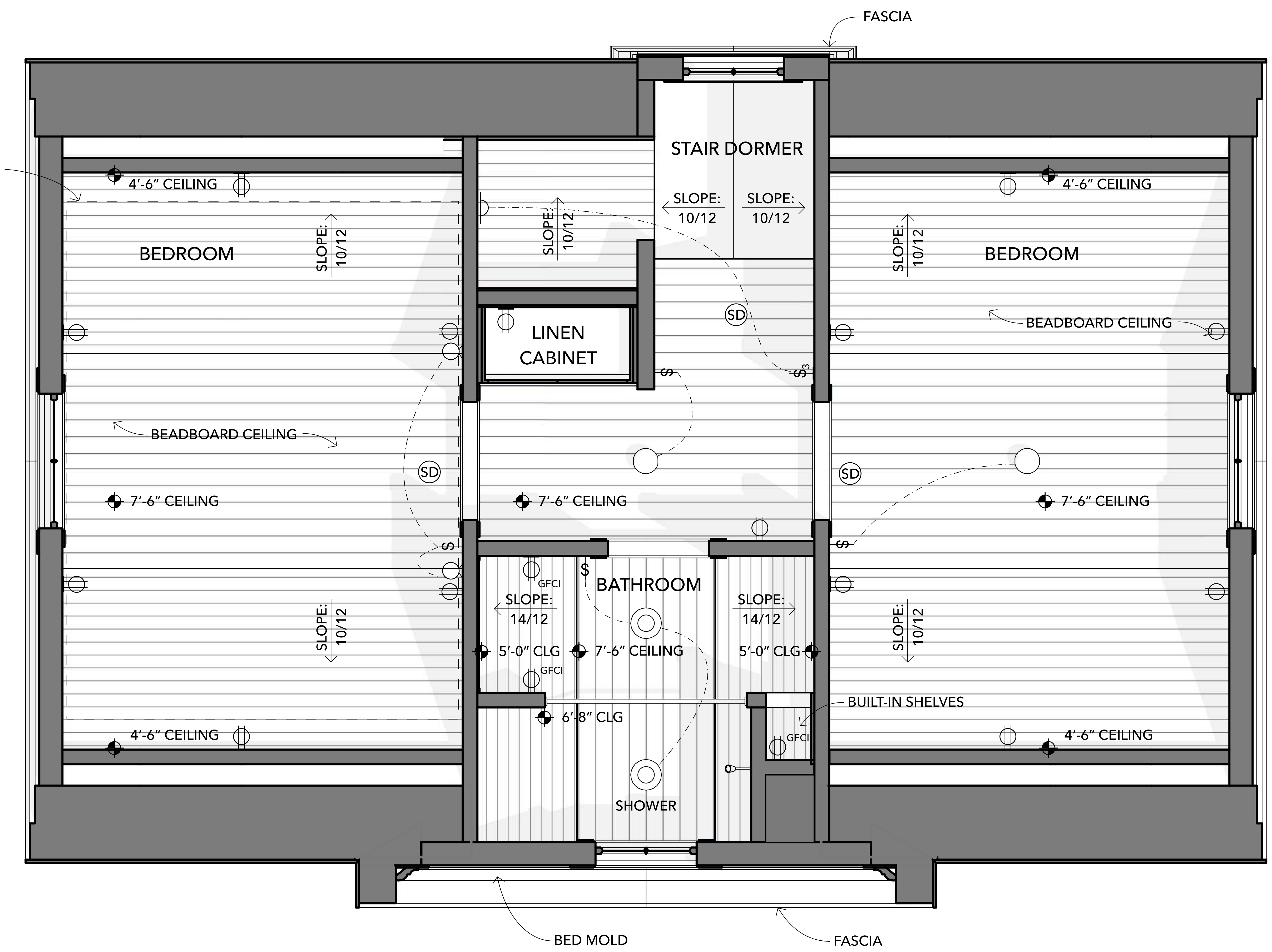
1ST RCP / ELECTRICAL

A1.4

NOTE: ANY AREA OF THE BEDROOM WITH LESS THAN A 5' CEILING DOES NOT QUALIFY AS SQUARE FOOTAGE.



NOTES:

1. CEILING HEIGHTS ARE APPROXIMATE (+/- 1" [25])

2. CENTER THE ELECTRICAL FIXTURES ON SURFACES, AND/OR WITH PRIMARY DESIGN ELEMENTS.

3. LINEN CABINET IN THE HALL MAY BE OMITTED. STAIRWAY CEILING HEIGHT REQUIREMENTS (AND THE SLOPED CEILING ABOVE) PREVENT IT FROM BEING PARTICULARLY LARGE.

4. SHOWER MAY BE CONVERTED INTO A STEAM SHOWER, OR REPLACED BY A CONVENTIONAL TUB. IF A TUB, THE CEILING WILL BE LOWER THAN 80" FOR ALL BUT A 42x30 AREA.

5. BY CODE, THE BACK OF THE LAVATORY AND TOILET CAN HAVE A 5' CEILING, BUT THE CEILING NEEDS TO BE AT LEAST 6'-8" AT THE FRONT OF THESE FIXTURES.

① 2ND LEVEL - REFLECTED CEILING PLAN / ELECTRICAL PLAN

SCALE: 1/2" = 1'-0"

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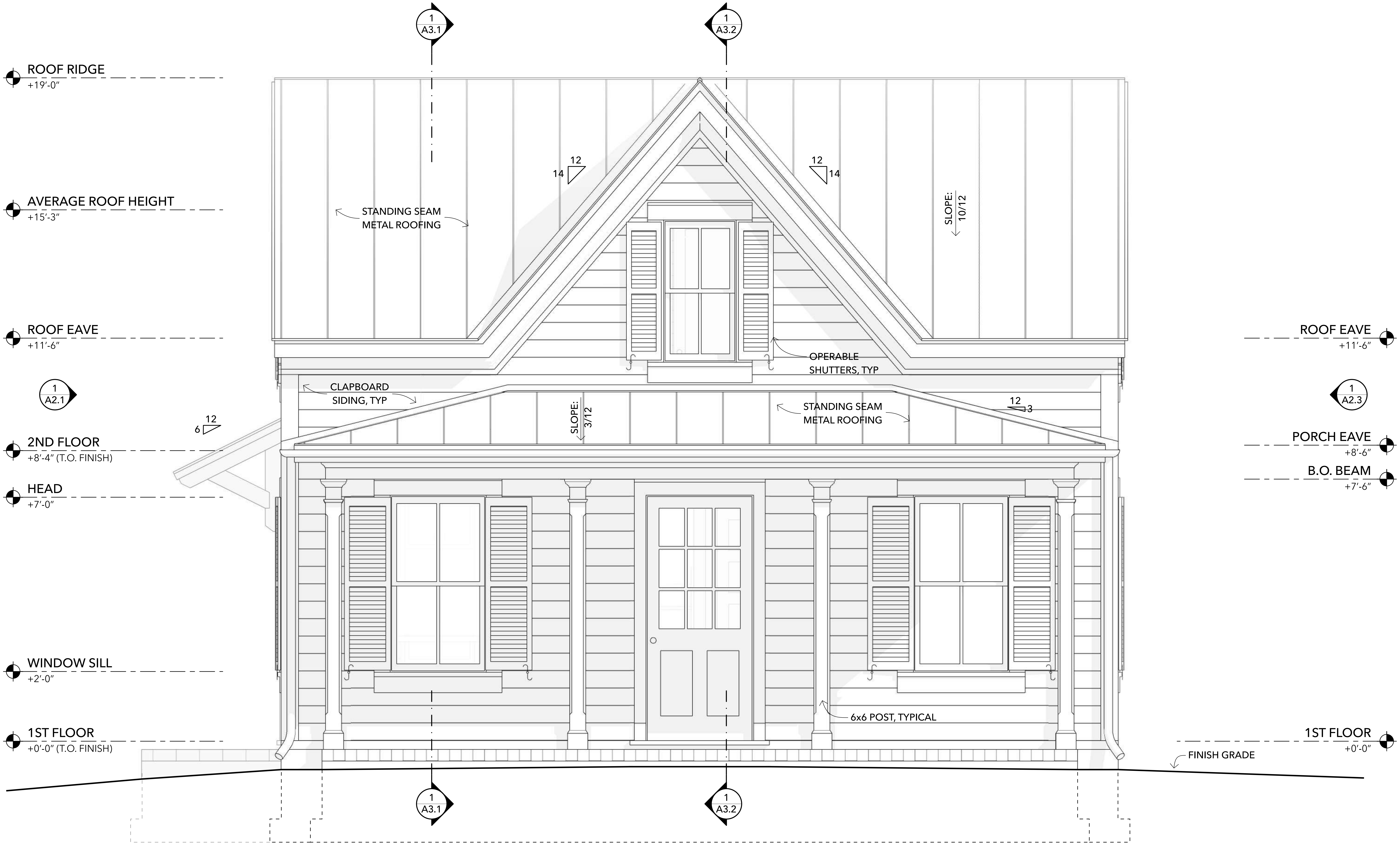
2ND RCP / ELECTRICAL

A1.5



① SOUTH ELEVATION

SCALE: 1/2" = 1'-0"

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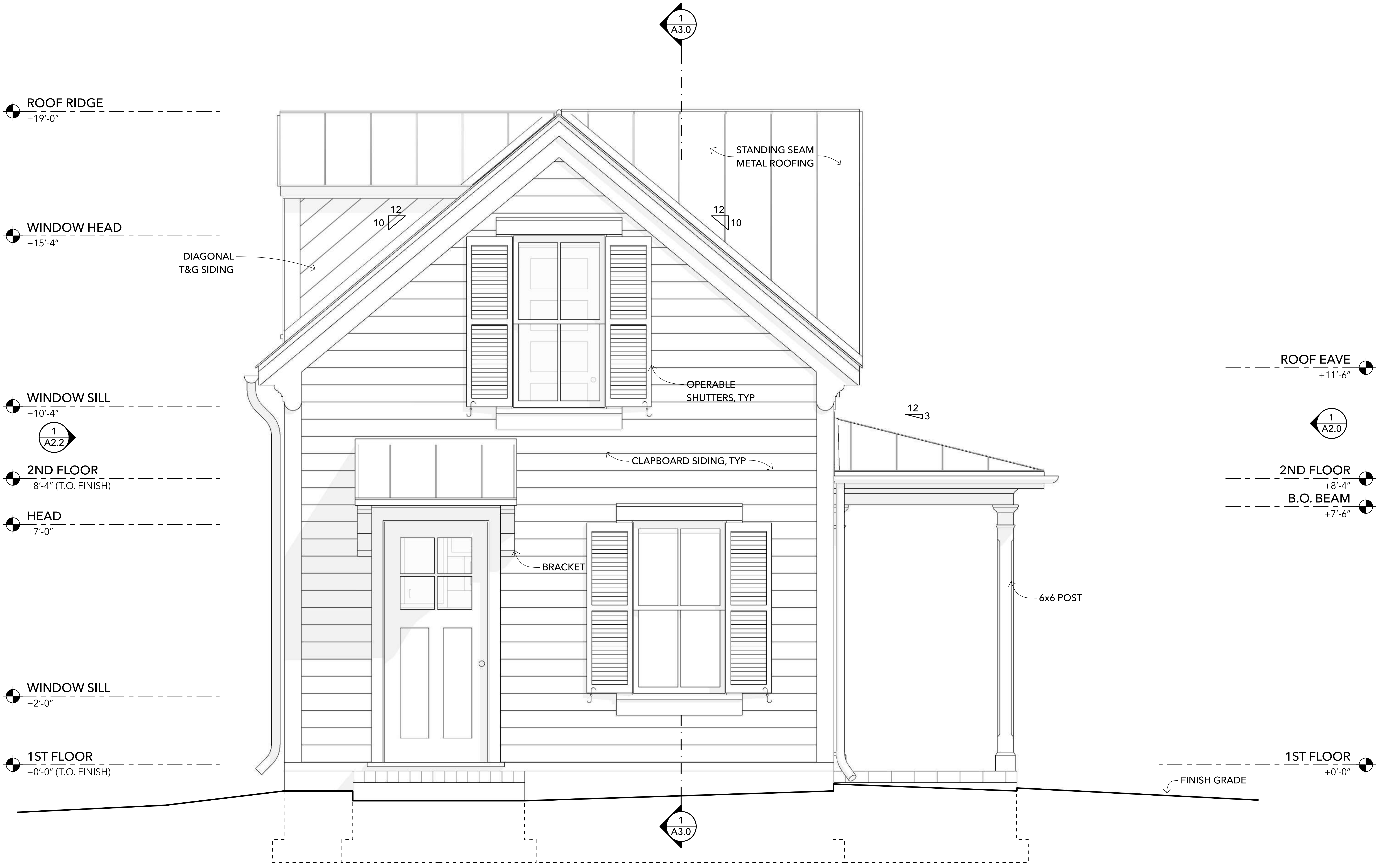
FRONT ELEVATION

A2.0



① WEST ELEVATION

SCALE: 1/2" = 1'-0"

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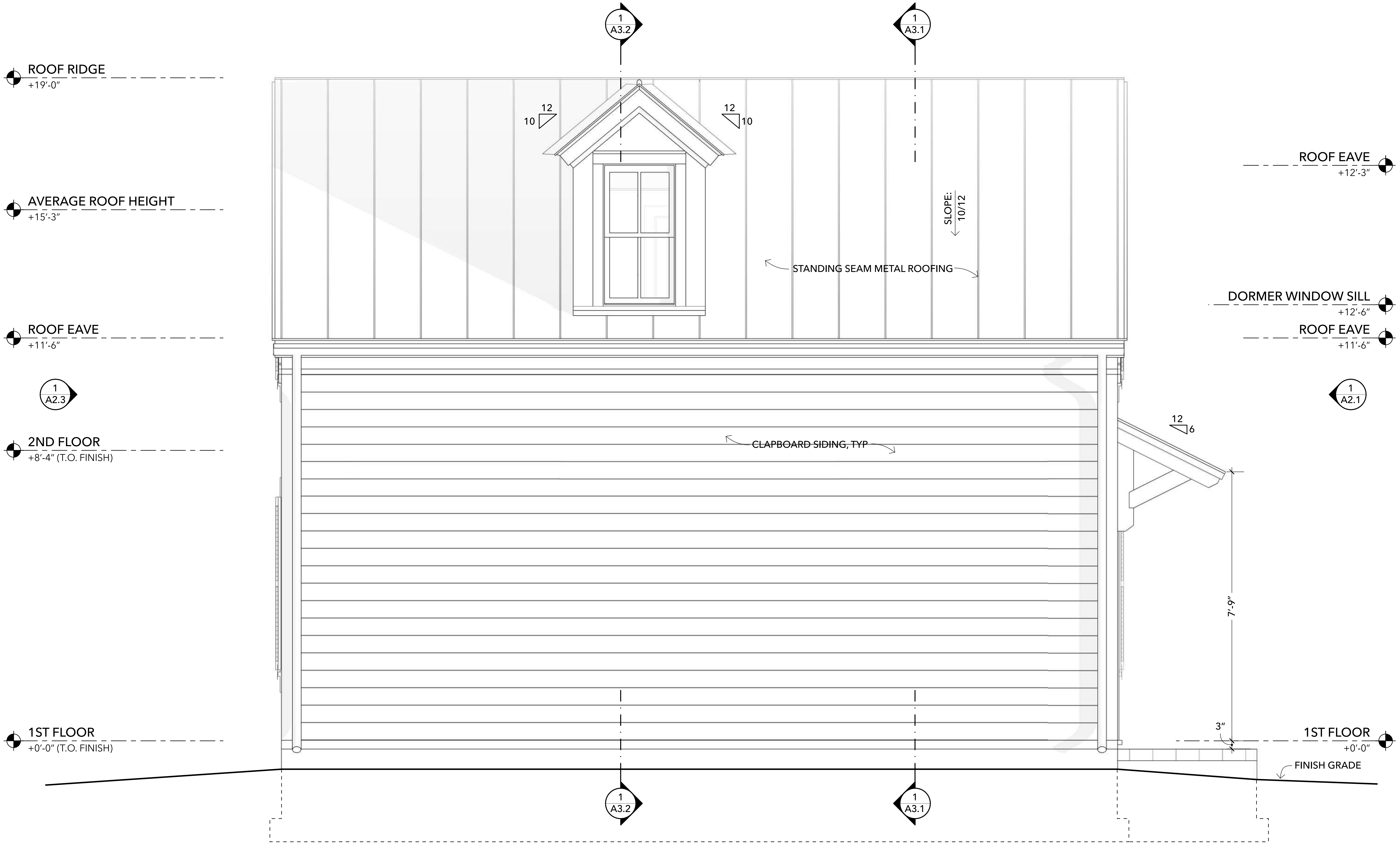
WEST ELEVATION

A2.1



① NORTH ELEVATION
SCALE: 1/2" = 1'-0"

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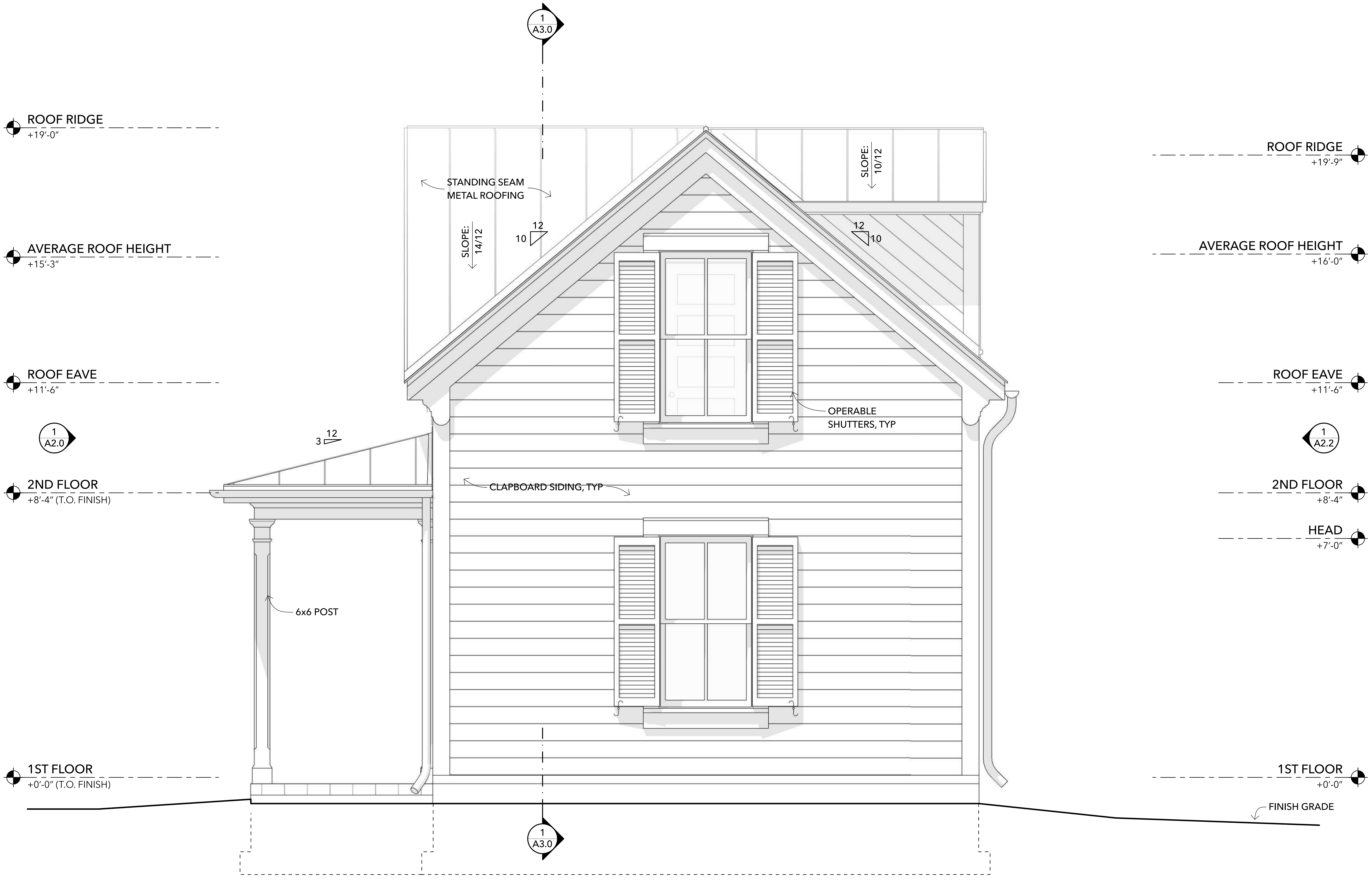
NORTH ELEVATION

A2.2



① EAST ELEVATION

SCALE: 1/2" = 1'-0"

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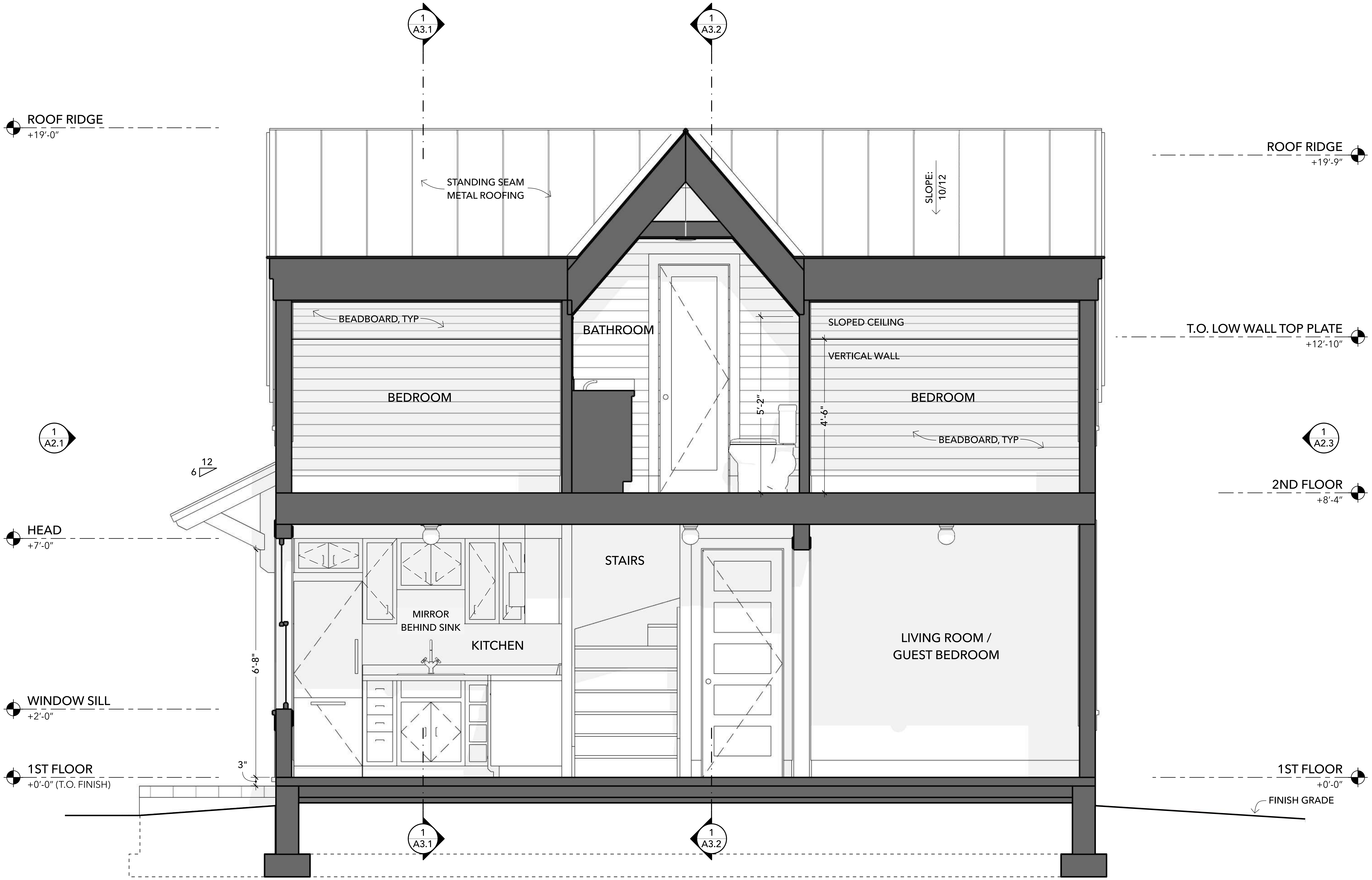
EAST ELEVATION

A2.3



① LONGITUDINAL SECTION

SCALE: 1/2" = 1'-0"

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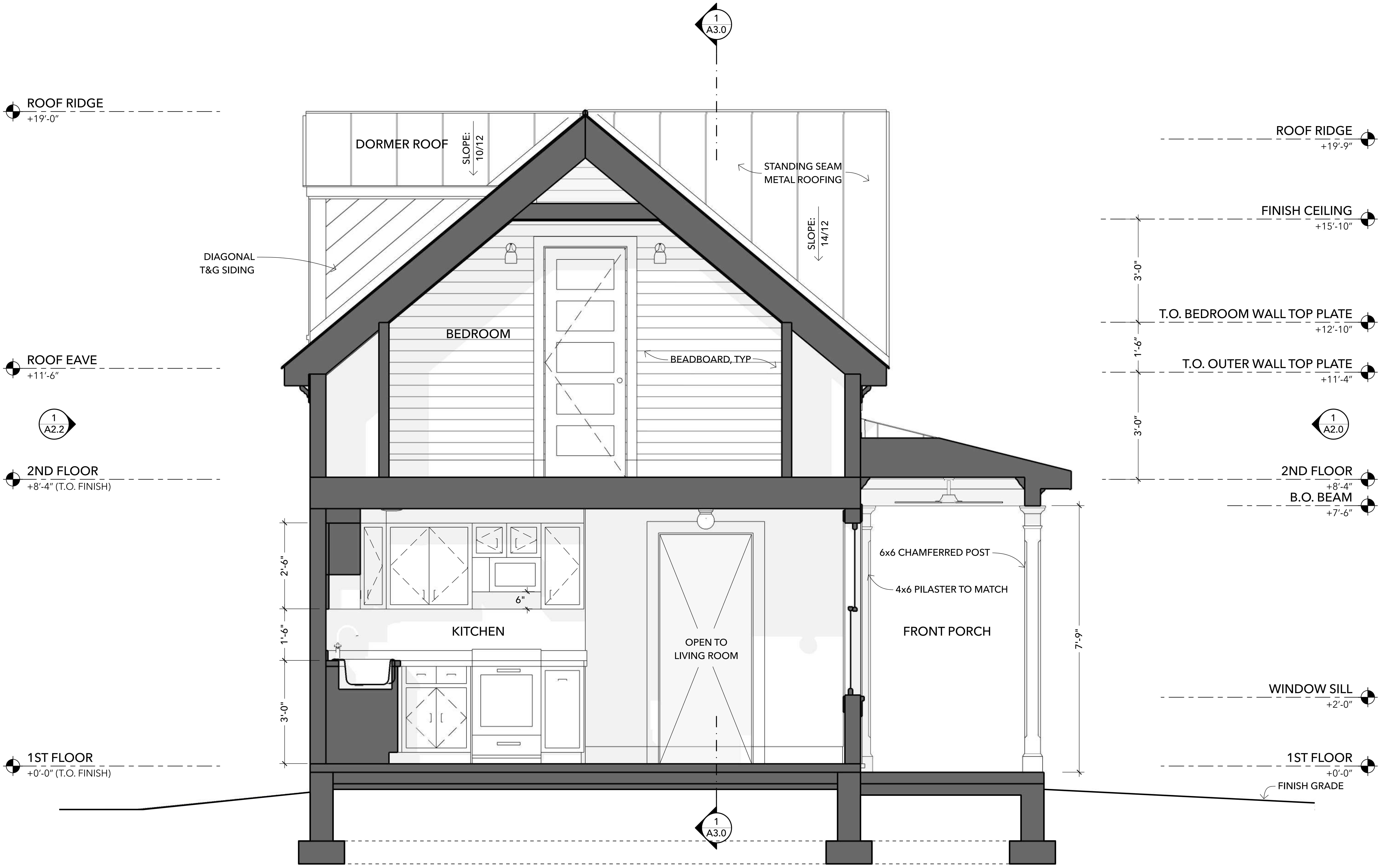
LONGITUDINAL SECTION

A3.0



① TRANSVERSE SECTION 1

SCALE: 1/2" = 1'-0"

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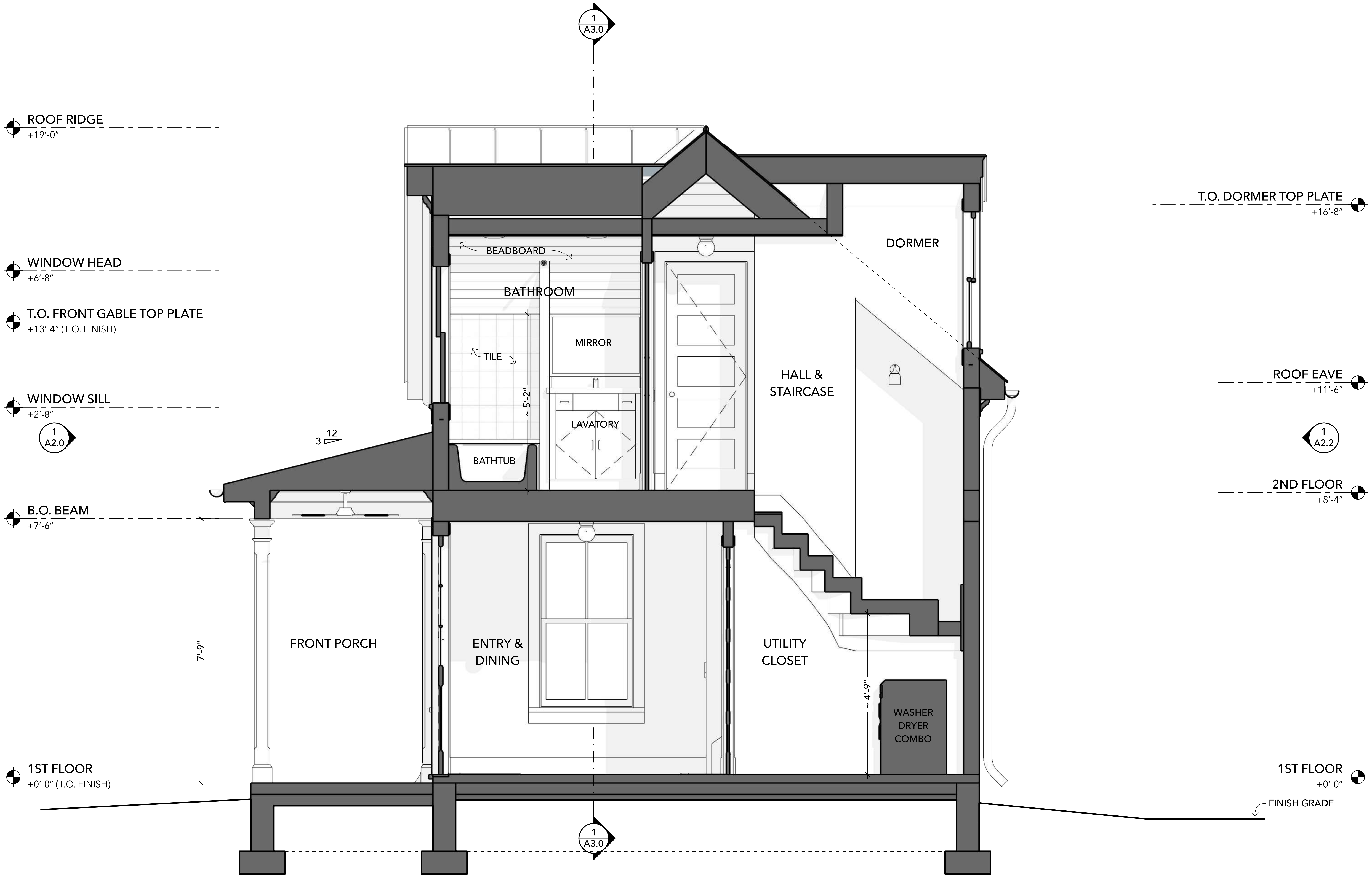
TRANSVERSE SECTION

A3.1



① TRANSVERSE SECTION 2
SCALE: 1/2" = 1'-0"

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TRANSVERSE SECTION AT STAIR

A3.2